

XLIII.—*New and obscure British Spiders.*

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[Plates XX. & XXI.]

SINCE my last contribution to the Ann. & Mag. Nat. Hist. in January 1891 few opportunities have offered themselves for working the likely places in the Lake Districts. A fortnight in the heart of the "Lakes" at Elterwater in July of last year, however, enabled me to do a little among the spiders, with the result that several rare and local species came to hand, while one addition was made to the British list—*Lophocarenum Mengei*, Sim.

A few days at Cannock, Staffordshire, in May of last year enabled me to add a fine species to science, *Tmeticus simplex*, F. Cb., while another very small spider, which I believe to be hitherto undescribed, turned up amongst some captures made in Dorset in 1888. This I have called *Leptyphantes plumiger*, though its exact generic position is somewhat doubtful.

To these new forms *Tmeticus Warburtonii*, Cb., perhaps ranks next in value; it occurred in some abundance along with its congener, *Tm. scopiger*, Grube, in Newton Moss, Penrith.

Other employments will not at present admit of my giving figures and descriptions of several other forms which are certainly new to science. Many of these are of the female sex; and though it is better to secure the males first, yet perhaps the simplest plan will be to describe and figure these as briefly and accurately as possible, trusting that time and an increased number of workers will contribute greatly towards finding partners for them.

I have taken this opportunity of publishing a few notes and figures of the differential characters of several obscure and closely-allied species—*Zilla atrica* and *Z. x-notata*, *Amaurobius similis* and *A. fenestralis*, &c.

New Species added to the British List, and two new to Science.

Fam. Therididæ.

Group LINYPHINI.

Tmeticus simplex, sp. n.

(Pl. XX. fig. 5, A, B, C, D, E, F, G.)

Length of male $1\frac{1}{2}$ line; female slightly larger.

Both sexes.—*Cephalothorax* red-brown or pale yellow, elongate-oval, slightly narrowed and bluffly rounded in front. Caput slightly depressed in front; dorsal profile horizontal, slightly concave in middle, gradually inclined towards the base; median line set with six or eight isolated curved hairs.

Eyes large and closely grouped; posterior row straight, eyes equal, equidistant, one diameter apart; anterior row slightly curved, convexity forwards, centrals smaller, half a diameter apart, one diameter from laterals.

Clypeus as high as ocular area, vertical.

Maxillæ with several setigerous granulations.

Sternum as broad as long, light brown, set with short isolated black hairs, terminating behind between posterior coxæ in a conical point.

Legs dull yellow-brown, clothed with short hairs; femora without spines, exhibiting a double row of long fine hairs beneath; genua with one spine at apex; tibiæ i., ii., iii. with two spines on upperside, tibiæ iv.* with one spine only, situated towards the base. Tarsal claws 3; superiors slender, pectinate, inferior with one tooth.

Abdomen dull whity-brown pinkish or darker olive-green, mottled with pale dull white spots, often exhibiting (female sex chiefly) a posterior, central, dorsal series of slender Λ -shaped bars; ventral surface margined on either side with a pale line.

Male.—*Falces* four times the length of the clypeus; basal joint very stout, convex on upper side, striate on outer side, exhibiting on the outer side in front rather towards the apex some fine setigerous granules; attenuated and divergent towards apex, bearing between the inner angle and the apex a long, stout, slightly curving, bluntly pointed tooth, directed outwards and forwards, its apex set with a single fine hair; upper margin of fang-groove furnished with five small teeth (Pl. XX. fig. 5, B).

Palpus short; cubital joint one half longer than broad, bearing at apex a single curving spine. Radial joint twice as long as broad, clothed with short hairs, its outer, upper, anterior angle produced into a short, sharp, up-curving spur (Pl. XX. fig. 5, E (a)).

Digital joint very small, one half only longer than radial joint, prominent at base on outer side, clothed with hairs, its apex exhibiting four or five bristles. Palpal organs simple,

* Tibiæ i., iv., &c. signifies the tibial joints of the first pair or fourth pair of legs, as the case may be. Thus also femora i., ii., &c.

exhibiting at their base, rather beneath the radial joint, a short, curved, dark spur (the homologue of the falciform process) (Pl. XX. fig. 5, F (b)); bearing at their apex a spiraliform membrane supported on a fine black spiral spine (Pl. XX. fig. 5, F (c)).

Female.—*Falces* convex at base in front, vertical, scarcely attenuate or divergent at apex; upper margin of fang-groove bearing five sharp teeth, lower margin with three small granulations.

Palpus spinose, without terminal tarsal claw (Pl. XX. fig. 5, A).

Epigyne not much developed externally, presenting more or less conspicuously a pair of spermathecae (Pl. XX. fig. 5, C) and two pairs of dark, sinuous, tubular ducts.

This very distinct little spider is closely allied to Tm. denticchis, Sim., and Tm. longisetosus, Em., but evidently quite different from either.

Sixty to eighty specimens were taken by myself upon the damp walls of a brewery cellar at Cannock, Staffordshire, in May 1891. The females constructed a small, rounded, flattened, pure white egg-cocoon in proximity with the delicate silken sheet forming the snare.

Cannock, Staffordshire.

Leptyphantès plumiger, sp. n. (Pl. XX. fig. 2.)

Male $\frac{2}{3}$ line.

Cephalothorax dull yellow-brown, horizontal above, abruptly depressed behind.

Eyes of posterior row large, situated in a straight line; centrals scarcely one diameter apart, half a diameter from the laterals. Anterior row straight; centrals much smaller, almost in contact, one quarter a diameter from the laterals.

Clypeus scarcely as high as the ocular area.

Falces short, stout, straight; upper margin of fang-groove furnished with two very small teeth.

Legs short, rather stout, clothed with fine hairs. Femora without spines; with a fringe of longer hairs beneath. Genual joints with a short fine spine at apex. Tibiæ with two fine erect spines, scarcely longer than the diameter of the joint. Metatarsi i. and ii. with one fine spine on the upperside near the base.

Abdomen dull sooty brown.

Palpi and palpal organs, *vide* Pl. XX. fig. 2.

This very small and obscure spider belongs to that little

group which seems to lie somewhere between *Leptyphantes*, *Bathyphantes*, and *Porhomma*.

Two specimens were found amongst other species collected in Dorset in 1888. It is most probable that these were taken in Hyde Bog, near Wareham, in May or June.

Group LOPHOCARENINI.

Lophocarenum Mengei, Sim.
(Pl. XX. fig. 1, a, b, c, d.)

Length of male $\frac{3}{4}$ line.

Both sexes.—*Cephalothorax* oval, narrowed in front, dark red-brown or black, margins slightly impunctate, striæ distinct.

Posterior row of eyes curved, convexity backwards. Eyes equal. Anterior row curved, convexity backwards; centrals much smaller.

Clypeus slightly inclined, as high as the ocular area.

Falces as long as the clypeus, convex at base, vertical; upper margin of fang-groove bearing three sharp teeth, two long, one short.

Sternum slightly longer than broad, dark black-brown, slightly impunctate, terminating behind between the posterior coxæ in a broad squarely truncate piece.

Legs short, yellow-brown, clothed with fine hairs. Tibiæ alone exhibiting a spine on upperside, these very small, barely visible. Tarsal claws three, superiors toothed. Tarsi iii. and iv. clothed beneath with numerous barbed hairs.

Abdomen dull olive-brown or black, glabrous, strongly and closely impunctate in both sexes.

Male with thick coriaceous covering or scutum over the whole dorsal area.

Female without scutum; anterior dorsal area exhibiting four small dull red rounded pits. Ventral surface paler, smooth, set with short hairs; pygidium exhibiting transverse wrinkles.

Male sex.—*Cephalothorax* exhibiting a high, vertical, globular, cephalic lobe (not always equally developed in every specimen), bearing on its anterior apex the posterior central pair of eyes; set with short erect pale hairs; exhibiting at its base on either side, immediately behind the lateral pair of eyes, a large, deep, oval excavation. Central region convex, dropping abruptly to the pedicle (Pl. XX. fig. 1, a).

Posterior row of eyes curved; centrals four diameters apart, placed on anterior apex of lobe (Pl. XX. fig. 1, *b*).

Anterior row curved; centrals much smaller, one diameter apart, two and a half diameters from laterals.

Palpus.—Cubital joint three times as long as its widest diameter. Radial joint two thirds the length of cubital, produced in front over base of digital joint into a long, tapering, straight spur, its apex slightly and abruptly hooked; its outer side set with a fringe of curving hairs. Palpal organs exhibiting at base on outer side beneath, a small hooked process, and at their apex a straight sharp spur, and adjacent to this a stout, spiraliform, curving, dark black spine. Digital joint slightly prominent on upperside at base (Pl. XX. fig. 1, *c*, 1, 2, 3).

Female sex.—*Caput* convex, thoracic dorsal outline concave in central region, convex behind, dropping abruptly towards the pedicle.

Posterior row of eyes curved, anterior margin of centrals in a line with posterior margin of laterals. Eyes equal; centrals one and a quarter diameter apart, one and a half diameter from laterals.

Anterior row curved; anterior margin of centrals in a line with the centre of laterals; centrals much smaller, half a diameter apart, one diameter from laterals.

Epigyne simple, presenting a transverse tongue-like central process, broader than long, bearing anteriorly on either side a small, circular, dark concavity; its posterior margin very slightly sinuous (Pl. XX. fig. 1, *d*).

Palpus bearing some stout spines; without terminal tarsal claw.

This very small but interesting species has been met with by M. Simon on the continent, but has never before been taken in the British Islands.

The male will be at once recognized by the large, globular, cephalic lobe and the radial joint of the palpus, and will not be mistaken for nemoralis, Bl., Blackwallii, Cb., belonging to the same genus.

It might be confounded with Peponocranium (Walckenaëra) ludicrum, Bl. But if it be noted that this latter species has long spines on the legs, that its integuments are not impunctate, and that the male has no abdominal dorsal scutum, there will be no confusion of the two spiders in either sex.

A dozen specimens were taken by myself in July 1891 on a swampy island in the middle of the Elterwater, near Ambleside, in the English Lake districts.

It forms another most interesting addition to the British arachnological fauna.

Notes on rare British Spiders, with Characters of some obscure and closely-allied Species.

Dictynidæ.

Amaurobius fenestralis, Stroem.

„ *similis*, Blk.

(Pl. XXI. figs. 10, 11, *a*, *b*, *c*.)

These two species occur in abundance in Cumberland and throughout the Lake districts. *A. fenestralis* is very common under stones and in the stone walls all over the fells near Carlisle, and may be always recognized by its smaller size.

The male may further be distinguished from *similis* by the straightness of the spur on the inner anterior angle of the radial joint.

The dark blotch on the anterior part of the abdomen is seldom or never divided as it is most frequently in *similis* (Pl. XXI. figs. 10, 11, *a*).

The females are not so easy to distinguish; but an examination of the epigyne will form a good, though I can scarcely affirm a certain, clue. There appears to be a want of stability in this portion of the female structure (Pl. XXI. figs. 10, 11, *b*). Pl. XXI. fig. 11, *c*, exhibits the nest of *A. fenestralis*, formed, between two stones, of bits of dry moss, insect debris, wings, legs, &c., while the female may be observed crouching beside her egg-sac in the centre.

This little species is never, so far as I am aware, found in outhouses or other buildings, nor have I ever taken it in very close proximity to buildings, though doubtless it will occur in the walls around farm buildings on the fells, where every wall contains numbers of specimens.

A. similis, on the other hand, is found abundantly, though not exclusively, in outhouses, stables, &c. There is scarcely a crevice in any garden-wall, paling, pallisade, which may not be tenanted by this ubiquitous spider. They are, however, also abundant in the fissures of the Red-Sandstone cliffs overhanging the streams, and in the quarries around Carlisle.

The males of this species may be recognized by the fact that the spur at the inner anterior angle of the radial joint is abruptly narrowed, its apex aculeate and much curved inwards and upwards towards the palpal organs.

For figures of the epigyne see Pl. XXI. figs. 10, 11, *b*, *c*.

Therididæ.

Section THERIDIONINI.

Phyllonethis lepidum, Wlk.

This interesting little species occurred in some abundance under stones in a marshy spot on the fells near the Tilberthwaite waterfalls in the neighbourhood of Coniston Water in July 1891.

It has hitherto only been taken in Dorset, so far as I am aware.

Section ERIGONINI.

Group LINIPHINI.

Genus LEPTYPHANTES.

Leptyphantes pinicola, Sim.

This little spider, added to the British list in Sept. 1890, was in evidence in an immature state upon Helvellyn in July 1891.

Leptyphantes ericæus, Blk. (Pl. XX. fig. 4, a, b, c.)

Length of male $\frac{7}{8}$ line.

Both sexes.—*Cephalothorax* almost as broad as long, narrowed in front; very pale dull yellow, with dusky marginal line. Ocular area prominent; eyes conspicuous, encircled with black. Dorsal profile-outline concave in centre, very convex behind, and abruptly sinking towards the base.

Clypeus scarcely as high as the ocular area, projecting a little forwards.

Falces two and a half times the height of the clypeus, long, vertical, straight, not attenuate or divergent towards apex; bearing three stiff hairs on inner side in front; outer side striate.

Sternum broader than long; brown, shining, convex, set with a few isolated black hairs; terminating between the posterior coxæ in a very broad squarely truncate piece.

Legs pale yellow, clothed with short hairs. Femora exhibiting beneath a double series of long fine hairs, the pair nearest the apex much longer; femora i. with a fine spine situated on the inner side a little towards the apex; femora ii., iii., iv. without spines.

Genus of all four pairs with a very long (three times the diameter) obliquely erect spine at apex. Tibiæ i. with two dorsal and two lateral spines on either side towards apex. Tibiæ ii. with two dorsal and one lateral spine towards apex. Tibiæ iii. and iv. with two dorsal spines only. Metatarsi of all four pairs with a single fine long (twice the diameter of the joint) spine towards the base.

Eyes large, closely grouped, seated on dark black spots. Posterior row straight, eyes equal, centrals scarcely half a diameter apart, a quarter of a diameter from the laterals. Anterior row straight, centrals a little smaller, almost in contact, scarcely one quarter a diameter from the laterals. The four central eyes form a quadrangle much narrower in front and longer than broad.

Abdomen oval, rather convex above, a little pointed towards the spinners; dorsal area pale dull yellow, sides and ventral surface dusky black.

Male.—Palpus. Humeral joint a little enlarged towards apex. Cubital joint very small, as broad as long, rounded. Radial joint narrow at base, enlarged in front and rounded; as broad as long. Both joints clothed with fine hairs; the radial joint exhibiting a single fine curving spine directed forwards.

Digital joint small, clothed with hairs. Palpal organs exhibiting on the outer side at the base a concave chitinous piece (falciform process), its outer margin bearing a short black spur directed inwards. At the apex close to the end of the chitinous sheath are two dark black spurs. The lateral stylum is developed into a pair of elongate lobes, not very distinct (Pl. XX. fig. 4, a, 1, 2, 3).

Female.—Rather larger than male, but similar in other respects.

Epigyne conspicuous, consisting of a short ovipositor-like prominence (Pl. XX. fig. 4, c), its apex exhibiting a transverse opening; from above presenting a semicircular form (Pl. XX. fig. 4, b).

This very small species is abundant amongst grass in the summer months. It will not be found very difficult to identify (though resembling Bathyphantes circumspecta) if it be first recognized as belonging to the genus Leptyphantes by the spine on the metatarsi.

The palpal organs of the male will furnish sure characters for its recognition; while the dusky abdomen, with its pale dorsal area, of the female, and the form of the epigyne will suffice for the identification of this sex.

Apparently generally distributed throughout the country.

Dorset ; Hertfordshire ; Epping Forest ; Cumberland ; and Scotland.

Leptyphantes alacris, Blk.

Males and females of this fine and rare spider were taken in some abundance amongst dead leaves in the woods at Wreay, near Carlisle, in April 1891.

Leptyphantes nebulosus, Snd.

Males and females of this somewhat local spider were taken at Cannock, Staffordshire, in May 1891, and also in Carlisle, Oct. 1892.

Genus BATHYPHANTES.

Bathypantes parvulus, Westr. (Pl. XXI. figs. 7, a, b.)

Length of male $1\frac{1}{4}$ line.

Cephalothorax dull yellow-brown, striae and margins tinged with sooty brown.

Abdomen dull black, unicolorous.

Legs pale orange-yellow. Femora i. with two spines, one above the other in front of the joint about the middle. Femora ii. and iii. with a single spine above, about the middle; iv. without any spine. Tibiæ i. with a dorsal and a lateral spine upon either side of the joint towards the apex; ii. with a dorsal and one on the posterior side towards the apex; iii. and iv. with one spine towards the base, another towards the apex on the upperside.

Genual joints with a single spine at the apex. Metatarsi without any spines.

The *palpi* of the male are very similar to those of *circumspecta*, but the falciform process (or hook) is more densely clothed with a fringe of hairs on the inner side (Pl. XXI. fig. 7, a (a)). The spiral spine at the apex scarcely takes so wide a sweep, but is otherwise very similar to that of the above-named species (Pl. XXI. fig. 7, a (b)).

This species may perhaps be most readily distinguished by the fact that the abdomen exhibits none of the transverse bars so noticeable in *circumspecta*, being in fact unicolorous.

Having no females by me I am unable to give a figure of the epigyne. Both *parvulus* and *circumspecta* may be distinguished from *ericæa*, *tenebricola*, *zebrinus*, &c. by the presence in these species of a spine on the metatarsi.

Not nearly so common a species as the next ; but found

occasionally during the summer months in various parts of England.

Bathyphantes gracilis, Blk. (Pl. XXI. figs. 6, a, b, c, d.)

Syn. *Bathyphantes circumspecta*, Blk.

Length of male rather less than 1 line.

Cephalothorax dull yellow-brown.

Sternum dark brown.

Abdomen with distinct pattern. Dorsal area dull white or yellowish, bearing a series of dark, somewhat curved, transverse bars.

Legs pale yellow straw-colour, often suffused with brown, very long and slender. Femora i. with a spine above and another in front about the middle of the joint; ii. with a single spine above about the middle; iii. and iv. without spines.

Genua of all four pairs with a single spine at apex. Tibiæ i. with three spines at the apex, one dorsal and two lateral, and a single dorsal spine towards base. Tibiæ ii. with two spines at the apex, dorsal and posterior lateral, and a single one towards base. Tibiæ iii. and iv. with a single dorsal spine towards apex and another towards the base of the joint. Metatarsi without any spines.

The *palpi* of the male are very similar to those of *parvulus*, but the fringe of hairs on the inner margin of the falciform process of the palpal organs (Pl. XXI. fig. 6, a) is not so regularly distributed as in that species. The spiral spine at the apex takes a wide sweep, the central black spur lying within its circumference (Pl. XXI. fig. 6, b) is more distinct, while the lobe supporting this spine is more globular than in *parvulus*.

The pattern on the abdomen will, however, render its identification in both sexes comparatively easy; though in some specimens the abdomen is of a uniform dull yellow or brown, with scarcely a trace of the transverse bars.

For the epigyne see Pl. XXI. fig. 6, c.

This is a very abundant spider amongst grass in the summer months, and will not be confounded with other small spiders belonging to the genus Leptyphantes (ericæa, tenebricola, zebrinus, &c.) if it be noticed that the metatarsi bear no spine above towards the base.

Genus TMETICUS.

Tmeticus scopiger, Grube.

„ *Warburtonii*, Cambr.

I had the good fortune to meet with abundance of these
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two fine species in August last amongst the long grass in Newton Moss, near Penrith.

The latter has hitherto only been taken near Southport, Lancashire, by Mr. C. Warburton. Both species were adult at the same time, though *scopiger* had the advantage by about a week.

Though there has never been any real doubt as to the validity of *Warburtonii* as a species distinct from *scopiger*, yet it is satisfactory to be able to examine specimens taken side by side in the adult state and in considerable numbers. As far as my observations have extended, there are none of the perplexing intermediate forms between the two species; but in every example I have obtained the distinguishing characters have maintained the same distinctness of definition.

Tmeticus rufus, Wid.

Abundance of females and several males, both adult, occurred amongst dry leaves in the woods at Armathwaite, near Carlisle, in April 1891.

I have also since taken this fine species amongst dead leaves in the woods near Cannock Chase, June 1891.

Tmeticus silvaticus, Blk.

Females of this rare species were taken by myself on Beacon Hill, near Penrith, in the spring of 1891.

Genus PORHOMMA.

Porhomma adipatum, L. K.

The female of this rare spider was taken by myself near Penrith in April 1891; but so far I have not been able to meet with any specimens of the male sex, though both sexes have been taken in the Cheviot Hills.

Porhomma montigena, Sim.

This spider, described in my last contribution to Ann. & Mag. Nat. Hist. as new (under the name *Tmeticus niger*), would appear to be identical with M. Simon's *P. montigena*, which he states to be an inhabitant of alpine regions.

It was not adult when I visited the summit of Helvellyn in June 1891 and 1892, but I found it plentiful in an immature state.

Genus DECYMBIUM.

Decymbium tibiale, Blk.

Two adult males and a female of this very distinct species were taken by myself amongst dead leaves in the woods at Wreay, near Carlisle, in April 1891.

They are very similar to *D. (Veriense) nigrum*, Blk., but the stout, gouty, tibiæ of the first two pair of legs render them easy to recognize in the male sex.

Genus TROXOCHRUS.

Troxochrus cirrifrons, Cb.

An adult male of this apparently very distinct little species occurred near Carlisle in 1890.

M. Simon considers it to be merely a variety of *T. scabriculus*, Cb.; but unless an examination of a much larger number seems to give evidence of a gradation of the distinguishing characters, one would be inclined to consider it as a distinct species.

Genus AREONCUS.

Areoncus vaporariorum, Cb.

A single immature male, which I feel pretty confident belongs to this species, was taken by myself in a cellar at Cannock, Staffordshire, in June 1891.

Epeiridæ.

Zilla x-notata, Clerck. (Pl. XXI. figs. 8, *a*, *b*.)

Zilla atrica, C. K. (Pl. XX. fig. 3; Pl. XXI. fig. 9, *a*.)

The very common *x-notata* can be very easily distinguished from "*atrica*" (which is scarcely less common) in the male sex by the comparative shortness of the palpi (*vide* Pl. XXI. figs. 8, 9, *a*). The distinctions by which in the female sex these two species may be recognized are less easily observable.

In the first species the epigynal area appears as a narrow, transverse, black plate; while under a higher power it resolves itself into the form shown on Pl. XXI. fig. 8, *b*.

The same portion of structure in "*atrica*" exhibits under a low power a similar appearance, but at its apex can easily be observed a cordiform dull white prominence (Pl. XXI. fig. 3).

These two characters—the one characteristic of the males, the other of the females of these two otherwise closely allied species—will be found quite sufficient for distinguishing them; but there are other characters, drawn from the colouring of the abdomen, which will help very greatly in determining their identity, though not so reliable as the above.

The shoulders of the abdomen are in “*x-notata*” sooty black and the whole abdomen is of a sooty or silvery grey colour; while in “*atrica*” the shoulders are rusty red-brown and the abdomen is of a delicate yellow, suffused at the sides with bright orange-red.

The clear yellow V-shaped space on the sternum is usually in “*atrica*” broader than in “*x-notata*”; but further comparison of a vast number of specimens has shown me that this character again, though a good one, is by no means reliable.

It may be regarded as a general rule that “*Z. x-notata*” constructs its web on stone bridges, in the angles of walls, windows, greenhouses, old buildings, &c., while “*atrica*” is seldom found far away from foliage of some sort.

But I have lately taken “*x-notata*” plentifully side by side on a holly-hedge with “*atrica*,” and I have taken “*atrica*” on railings, bridges, and, singularly enough, on the “Roman wall,” far away from trees of any sort.

Both these species are very abundant in and about Carlisle, and, indeed, throughout the country; but since no figures of the distinguishing characters of the females have yet been published by our English authorities, I have ventured to give them on Plate XX. fig. 3 and Plate XXI. fig. 8, b.

List of Species noted and described.

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|---|---|
| <i>Amaurobius similis</i> , Blackw.,
p. 389. | <i>Tmeticus scopiger</i> , Grube, p. 393. |
| — <i>fenestralis</i> , Stroem, p. 389. | — <i>Warburtonii</i> , Cambr.,
p. 393. |
| <i>Phyllonethis lepidum</i> , Wlk.,
p. 390. | — <i>simplex</i> , F. Cb., p. 384. |
| <i>Leptyphantas pinicola</i> , Sim.,
p. 390. | — <i>rufus</i> , Wid., p. 394. |
| — <i>nebulosus</i> , Snd., p. 392. | — <i>silvaticus</i> , Blk., p. 394. |
| — <i>ericæus</i> , Blk., p. 390. | <i>Porhemma adipatum</i> , L. K.,
p. 394. |
| — <i>plumiger</i> , F. Cb., p. 386. | — <i>montigena</i> , Sim., p. 394. |
| — <i>alacris</i> , Blk., p. 392. | <i>Decymbium tibiale</i> , Blk., p. 395. |
| <i>Lophocarenum Mengei</i> , Sim.,
p. 387. | <i>Troxochrus cirrifrons</i> , Cambr.,
p. 395. |
| <i>Bathyphantas parvulus</i> , Westr.,
p. 392. | <i>Arconcus vaporariorum</i> , Cambr.,
p. 395. |
| — <i>gracilis</i> , Blk., p. 393. | <i>Zilla x-notata</i> , Clerck, p. 395. |
| | — <i>atrica</i> , C. K., p. 395. |

EXPLANATION OF THE PLATES.

PLATE XX.

- Fig. 1. Lophocarenum Mengei*, Sim.
a. Profile of male.
b. Cephalic eminence from above.
c. Left palpus of male.
d. Epigyne of female.
- Fig. 2. Leptyphantès plumiger*, F. Cb. Palpus of male.
a. Falciform process.
b. Lower branch of lateral stylum, enlarged.
c. Upper branch of ditto, enlarged.
- Fig. 3. Zilla atrica.* Epigyne of female from above.
- Fig. 4. Leptyphantès ericæus*, Blk.
a. Left palpus of male: (1) falciform process; (2) lateral stylum; (3) apical spines.
b. Epigyne of female from above.
c. Lateral view of ditto.
- Fig. 5. Tmeticus simplex*, F. Cb.
A. Profile of female, highly magnified.
B. Caput and falces of male from in front.
C. Left falx of female.
D. Epigyne of female.
E. Palpus of male from above: (*a*) outer spur of radial joint.
F. Palpus from outer side: (*a*) spur of radial joint; (*b*) falciform process of palpal organs, very small in this species; (*c*) spiralfilm membrane.
G. Left palpus from above.

PLATE XXI.

- Fig. 6. Bathyphantès gracilis*, Blk.
a. Left palpus of male from the outside: (1) falciform process; (2) spiral spine; (3) lateral coil.
b. Ditto, exhibiting apex of palpal organs: (1) spiral spine; (2) termination of lateral coil.
c. Epigyne of female.
d. Lateral view.
- Fig. 7. Bathyphantès parvulus*, Wstr.
a. Left palpus of male from the outside: (*a*) falciform process; (*b*) spiral spine.
b. Epigyne of female from above.
- Fig. 8. Zilla x-notata*, Clerck.
a. Right palpus of male.
b. Epigyne of female from above.
- Fig. 9. Zilla atrica*, C. K.
a. Left palpus of male.
- Fig. 10. Amaurobius similis*, Blk.
a. Female; legs and palpi truncated.
b. Epigynal area from above.
c. Epigynal area—taken from a less mature specimen.
- Fig. 11. Amaurobius fenestralis*, Stroem.
a. Female; legs and palpi truncated.
b. Epigynal area from above.
c. Female and cocoon within silken nest constructed beneath a stone.

[The above figures are all more or less highly enlarged.]